

**Score Sheet Evaluating Gravel Roads in Their
Maintenance of Water Quality**

Road Name or Fire Lane Number: _____

Municipality: _____

Book and Page number of deed for road: Book: _____

Page: _____

Road is seasonal _____ **Road is year round** _____,
If year round, is it plowed in the winter _____

**Is winter and/or "mud season" use prohibited by owners or the Road
Association?** _____

Right of way width if known: _____ **Approximate Road Length:** _____

Number of culvert crossings: _____

Is the road in the shoreland zone? _____ **If yes, What percentage is
within 100 feet of Lake?** _____

Is there an active Road Association for the road? _____

Contact Person: _____

Telephone number: _____

What immediate Lake Watershed is the road located in: _____

**If in a lake watershed, is the lake considered most at risk by the
DEP?** _____

Name of evaluator: _____

Date of Evaluation: _____

Weather conditions: _____

The procedure developed to evaluate roads includes the following:

NOTE: It is strongly recommended that a road be evaluated during a rain event (especially if soils contain a lot of silts and clays) so that you can observe the quality of the runoff and where it is discharged in addition to water flow on the road surface in culverts and in ditches.

- 1) Walk or drive entire length of road to determine location of culverts, ditch turnouts and steep slopes. Locate any potential erosion sites, discharge points for culverts and ditches along lakes or streams. Note length and width of road.
- 2) Evaluate Road using Section 1 Water Quality. If score is 100 or greater **STOP**, Road meets standards.
- 3) If you must evaluate using Section 2 and /or 3, establish a sample station at every other telephone or power pole on the road. If few or no poles are present, establish sample stations at approximately 10%, 20%, 40%, 60%, and 80% of road length. Use the small boxes on the score sheet to record ratings at each station.
- 4) When evaluating for section 2, at each sample station, measure crown, and evaluate the road surface within 25 feet of either side of the pole or sample location. For section 3, rate shoulders and ditches in these areas.
- 5) If you must evaluate using Section 4, locate each culvert crossing and rate each culvert. Note if there are locations that culverts need to be installed. Use the small boxes on the score sheet to record ratings at each culvert location.
- 6) Average ratings for each criterion and assign score. (Round up to the highest score if .5 or greater)
- 7) Add all scores and come up with the final score for each section evaluated. Each section's score must meet or exceed score indicated "to qualify" to meet standards for that section.

Section 1. Water Quality

		SCORE
1. Is there evidence of eroded road surface materials being discharged either directly or indirectly into lakes, streams or nearby waterbodies?	<div> 0 Substantial evidence 10 Minor evidence 20 No evidence </div> <p>If Substantial evidence, Road does not qualify and you must evaluate using Section 2 and repair accordingly</p>	
2. Is there evidence of eroded materials from ditches or shoulders being discharged either directly or indirectly into lakes, streams or nearby waterbodies?	<div> 0 Substantial evidence 10 Minor evidence 20 No evidence </div> <p>If Substantial evidence, Road does not qualify and you must evaluate using Section 3 and repair accordingly</p>	
3. Is there evidence of any erosion occurring from road crossings with materials being discharged directly or indirectly into lakes, streams or nearby waterbodies?	<div> 0 Substantial evidence 10 Minor evidence 20 No evidence </div> <p>If Substantial evidence, Road does not qualify and you must evaluate using Section 4 and repair accordingly</p>	
4. Does road slope to lake in a straight path and discharge most of its drainage to the lake?	<div> 0 All 5 Most 10 Some 20 None </div> <p>If “all or most”, Road does not quality and you must evaluate using Section 2 and modify accordingly</p>	
5. Are culverts, located in streams that contain fish, sized at 1.2 times the stream’s bank full width and sloped at 3% or less?	<div> 0 None 5 Some 10 Most 20 All or N/A </div>	
6. Are culverts, located in streams that contain fish, imbedded into stream channel and otherwise do not impede fish passage?	<div> 0 None 5 Some 10 Most 20 All or N/A </div>	
Total Available Points = 120	<p>(100 to qualify) <u>If score is 100 or better, and sections 1-4 qualify, road meets standards</u></p>	

NOTE: If road scores 10 points or less on questions 1 through 3, the road is in violation of the erosion and sediment control law if it is located in a watershed of a body of water most at risk from development. If it is not located in a watershed of a body of water most at risk, it will be in violation of the erosion and sediment control law if the condition persists after July 1, 2010.

Section 2. Road Base and Surface Areas

		SCORE																														
1. Road constructed <u>above</u> original ground level to facilitate drainage/structural integrity of road base materials.	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
2. Gravel road surface is at least 4 to 6 inches, is compacted, and is composed of a firmly packed aggregate. <i>(Refer to page 8 and 9 of the Camp Road Manual for testing procedure)</i>	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
3. Gravel road surface provides good traction and is not highly erodible and dusty (too many fines).	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
4. Level or low slope road surfaces are crowned to shed water at ½ inch of rise per foot of road width, or contain alternative drainage structures, such as waterbars, or are otherwise designed to direct stormwater as sheet flow off of the road surface (insloped /outsloped). <i>(Refer to page 11 and 12 of the Camp Road Manual for information on Determining Road Crown)</i>	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
5. Steep sloped road surfaces are crowned to shed water at ¾ inch of rise per foot of road width, or contain alternative drainage structures or are otherwise designed to direct stormwater as sheet flow off of the road surface or are paved. <i>(Refer to page 11 and 12 of the Camp Road Manual for information on Determining Road Crown)</i>	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
6. Stormwater flow from the road surface is directed to stable ditches, a vegetated buffer or stable vegetated areas (that are not wetlands) of at least 50 feet in width between the road and a waterbody.	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
7. Dust from the road surface is effectively controlled using materials to keep road surface intact.	<div>0 Never</div> <div>1 Controlled only in response to complaints</div> <div>2 Occasionally</div> <div>3 Regularly</div>	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																														
Total Available Points = 21	(14 to qualify) <u>If score is 14 or better, road meets these standards</u>																															

Section 3. Road Shoulders and Ditches

		SCORE			
1. Road shoulders are stabilized with vegetation or have a firmly packed gravel surface	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Road shoulders are sloped to promote surface drainage away from the road and into adjacent ditches or buffer areas. A “false ditch” or berm of road material is <u>not</u> present which might prevent runoff from draining off the road surface	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Ditches are stabilized with vegetation and/or rock riprap shaded with vegetation and have no signs of excessive erosion	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Ditches are U shaped (versus V-shaped) with side slopes less than 2 to 1 (50% slope) that are properly sized (<i>Refer to page 15 thru 19 of the Camp Road Manual for information on ditches</i>)	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Ditches do not discharge directly into the lake but discharge from a stable outlet into a vegetated buffer (that is not a wetland) of at least 50 feet in width between the outlet and receiving waterbody	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Ditches have appropriately located and spaced turnouts that direct water into stable vegetated buffer areas (that are not wetlands) of at least 50 feet in width between the turnout outlet and any waterbody	<div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Available Points = 18	(12 to qualify) <u>If score is 12 or better, road meets these standards</u>				

Section 4. Culverts and Bridges

		SCORE																				
1. Culverts are large enough to accommodate flow, properly installed, and covered with at least one foot of fill or half the culvert diameter (if over 24 inches) <i>(Refer to pages 21 thru 24 of the Camp Road Manual for information on Culverts)</i>	<div style="display: flex; justify-content: space-around;"> <div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
2. Culvert inlets are stable with properly installed rock riprap or vegetation	<div style="display: flex; justify-content: space-around;"> <div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
3. Culvert outlets are stable with properly installed rock riprap or vegetation	<div style="display: flex; justify-content: space-around;"> <div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
4. Culvert bore shows no signs of crushing, bowing or obstructions that could impair water flow	<div style="display: flex; justify-content: space-around;"> <div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
5. Appropriate number of culverts installed and located to accommodate flow and there is no sign of road topping, and/or erosion occurring <i>(Refer to pages 20 of the Camp Road Manual for information on Culvert installation)</i>	<div style="display: flex; justify-content: space-around;"> <div>0 None Installed but needed</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
6. Evidence indicates that culverts are working to maximum capacity and are not plugged and in need of cleaning or subject to ice jams in winter.	<div style="display: flex; justify-content: space-around;"> <div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
7. Bridge abutments and wing walls are stable with no visible signs of erosion occurring.	<div style="display: flex; justify-content: space-around;"> <div>0 None</div> <div>1 Some</div> <div>2 Most</div> <div>3 All or N/A</div> </div>	<table border="1" style="width: 100%; height: 50px;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																				
Total Available Points = 21	(14 to qualify) <u>If score is 14 or better, road meets these standards</u>																					